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(54) **EXPENDABLE MANAGEMENT METHOD AND SYSTEM**

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(57) **ABSTRACT**

When data of the number of printed paper sheets is transmitted from a user device to a service center, the service center charges on the basis of a unit price corresponding to the agreement contents of each user and the number of printed paper sheets and notifies the user of the payable amount. In addition, upon receiving toner low information from the user device, the service center predicts the toner out time and issues a notification of cartridge supply and empty cartridge collection to the user.

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              |  INVOICE
              !  ‾‾‾‾‾‾‾

      CHARGE FOR * * * * YEAR * * MONTH IS

NUMBER OF DEVICES COVERED BY AGREEMENT:  X X PIECES
TOTAL NUMBER OF PRINTED PAPER SHEETS:     △ △ LEAVES
BASIC CHARGE:                             □ □ YEN
UNIT PRICE PER PRINT:                         YEN
* * * * * DISCOUNT:                 X X X    (YEN / %)

      PAYABLE AMOUNT:                  O O O O YEN


   O  IF YOU APPROVE, PLEASE CLICK ON "YES"
   ●  IF THERE IS ANY QUESTION, PLEASE CLICK ON "NO".
      PERSONNEL IN OUR SERVICE CENTER WILL RESPOND.


         [ YES ]        [ NO ]
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DOCUMENT-IDENTIFIER: US 20010004734 A1

TITLE: Method, system and program product for managing and
                  ordering supplies for office equipment

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Current US Classification, US Primary Class/Subclass - CCPR (1):
705/26

Detail Description Paragraph - DETX (63):
[0085] The printing engine 21 is an essential component part concerned in printing in the printer 2, and also is adapted to transmit event information such as the remainder or inventory of supplies and errors to the collection information memory 22 and the information judging unit 23. The supplies of the printer 2 include **toner cartridges,** printing paper, feed rolls for feeding paper inside the printer, or the like. There has been recently a printing apparatus added with the function of stapling sheets of printed paper. In such a printer, staples are included items in the supplies. The printing engine 21, the collection information memory 22 and the information judging unit 23 constitute a supplies sensing unit.

Detail Description Paragraph - DETX (65):
[0087] As already described above, the remainder of the supplies signifies the quantity of the supplies held in the printer 2 per se: for example, the quantity of toner remaining inside a **toner cartridge** mounted on the printer 2, or the quantity of printing paper stacked in a paper tray in the printer 2. As for feed rolls, abrasion caused by friction with the printing paper must be taken into consideration. Such abrasion cannot signify the remainder in a strict sense. However, the remainder according to the present invention is defined to encompass the degree of such exhaustion. Such examples include developers, ink ribbons or the like in addition to the feed rolls. Well-known means in the prior art may be used in order to sense the remainder lifetime of the above-exemplified supplies.

Detail Description Paragraph - DETX (66):
[0088] Additionally, as already described above, the inventory of the

supplies signifies the quantity (number) of supplies held in a place other than the printer 2. For example, if a user stocks two **toner cartridges,** the inventory of the **toner cartridges** is two. The same goes for the printing paper or the like. Since it is difficult to sense the inventory of the stored supplies by the printer 2 per se, for example, the administrator of the printer 2 can enter the inventory in the memory by means of inputting or the like via the console panel 28 in the printer 2 or keypad on a terminal.

Detail Description Paragraph - DETX (69):

[0091] For example, upon receipt of information instructing the ordering of a **toner cartridge** from the information judging unit 23, the order information relating to the **toner cartridge** stored in the order information memory 30 is read. In the meanwhile, the order sheet form is read from the form memory 31, and then, the order sheet is created by filling in the order information in the order sheet form. In the case where a plurality of formats of order sheet forms are stored in the form memory 31, the order sheet form to be used in ordering a **toner cartridge** is retrieved.

Detail Description Paragraph - DETX (70):

[0092] FIG. 4 illustrates one example of a filled-in order sheet. FIG. 3 illustrates a basic form of the order sheet. By way of this example, when the information judging unit 23 judges that **toner cartridges,** printing paper, feed rolls or the like need to be ordered, each order information is read from the order information memory 30 to be thus filled in the appropriate places on the order sheet form illustrated in FIG. 3. The filled-in order sheet is transferred to the e-mail document creating unit 25. The order sheet form illustrated in FIG. 3 will be explained later.

Detail Description Paragraph - DETX (75):

[0097] The order information memory 30 stores therein the quantity of each of supplies to be ordered once, that is, stores therein information, for example, three in case of the **toner cartridges** or five cartons in case of the printing paper. The order quantity is assumed to be dependent upon a user of the printer 2. Namely, in case of a user who consumes many pieces of printing paper, the order quantity is increased; in the case of a user who consumes a few pieces of printing paper, the order quantity is decreased. Consequently, the order information stored in the order information memory 30 is set and registered by the user of the printer 2. Furthermore, the order quantity can be automatically increased or decreased according to the using frequency of each of the supplies. For example, if the order quantity is set to three at the maximum and one at the minimum according to the using frequency, the

order
quantity can be varied within the setting range, for example, three in the case of the high using frequency, two in the case of the regular using frequency and one in the case of the low using frequency. The administrator of the printer 2 can set and register the order information by inputting on the console panel 28 of the printer 2. The order information includes the product code, unit price, order unit and price of the items in addition to the product name and order quantity of the items, which may be appropriately determined by the user. The order information memory 30 is provided with an order information master, described later.

Detail Description Paragraph - DETX (77):
[0099] The form of the order sheet stored is not limited to one kind. For example, at least two kinds of order sheet forms different in only ordering destination need be stored in the case where the ordering destinations of **toner cartridges** and printing paper are different. Otherwise, there may be stored a plurality of kinds of order sheet forms different in basic format.

Detail Description Paragraph - DETX (82):
[0104] The order information master has "the type of supply," "a lower limit of inventory," "the order number," "an appointed date of delivery" and "a unit price" as labels. "The type of supply" signifies various supplies such as **toner cartridges** and printing paper used in the printer 2, and is a key in the order information master. "The lower limit of inventory" signifies a lower limit of the inventory which requires issuance of an order sheet, and the lower limit can be set by the user of the printer 2. For example, assuming that **toner cartridges** are to be ordered when the inventory becomes two, the lower limit of the inventory of **toner cartridges** is two. "The order number" signifies the number of supplies to be ordered. "The order number" can also be set by the user of the printer 2 in the same manner as the case of "the lower limit of the inventory." For example, on the assumption that two **toner cartridges** are ordered at a time, "the order number" is two. "The appointed date of delivery" is a standard appointed date of delivery after the ordering of each of the supplies until the delivery. "The appointed date of delivery" is referred to by the administrator of the printer 2 in actually determining an order timing. "The unit price" is a price per supply, and is referred to by the administrator of the printer 2 and the approver of the ordering for confirmation of the ordering price in ordering.

Detail Description Paragraph - DETX (109):
[0131] The order information master illustrated in FIG. 12 stores therein